REMARKS

This Amendment is filed in response to the Final Office Action mailed on June 26, 2006 and the Advisory Action mailed August 22, 2006. All objections and rejections are respectfully traversed.

Claims 1-2, 4, 6-11, 13-16, 18-20, and 24-31 are now pending in the case.

Claims 1, 2, 4, 6, 7, 9, 11, 13, 16, 18-20 have been amended.

Claims 24-31 have been added.

Objections under 37 C.F.R. 1.75

At paragraph 1 of the Final Office Action, the Examiner advised that "should claims 1 and 9 be found allowable, claims 18 and 19, respectively will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof." Such objection is believed to be moot in light of the amendments to claims 1, 9, 18 and 19.

Rejected Under 35 U.S.C. § 112, First Paragraph

At paragraphs 2-3 of the Final Office Action, claims 21-23 were cited under 35 U.S.C. § 112, first paragraph. Claims 21-23 are no longer pending in the case and accordingly this rejection is believed to be moot.

Claims Rejected Under 35 U.S.C. § 102

At paragraphs 4-5 of the Final Office Action, claims 1-2, 5, 7, 9-11, 13-16, and 18-20 were cited under 35 U.S.C. §102(e) as in light of Crayford, U.S. Patent No. 6,269,098, issued on July 31, 2001 (hereinafter "Crayford").

The Applicant's claim 1, representative in part of many of the other rejected claims, sets forth:

> 1. A method of operating a switch for frames in a computer network, comprising:
>
> receiving a frame (received frame) at a port of said switch, said received frame containing one or more indicia of frame type, ***said one or more indicia of frame type including an indicia of a protocol type***;
>
> accessing a virtual local area network (VLAN) value associated with the port;
>
> ***deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type and said VLAN value***, said derived VLAN value for use internal to said switch;
>
> accessing a forwarding data base with said derived VLAN value to determine a destination address; and,
>
> forwarding, in response to said derived VLAN value, said received frame to an output port for transmission to the destination address.

By way of background, Crayford describes a network switch for switching frames among multiple ports, in which the number of VLANs supported may be readily scaled. *See* col. 2, lines 10-13. The switch supports "tagged frames," which include a VLAN ID value in the frames themselves (*see* Fig. 7B, 2B) and "untagged frames," which do not include a VLAN ID value in the frames (*see* Fig. 7A). *See* col. 8, lines 23-48. For tagged frames, the VLAN ID values are mapped to corresponding shorter VLAN index values (only 5-bits as opposed to the 16-bit VLAN ID values) that are then used in forwarding the frames. *See* col. 8, lines 38-48 and col. 9, lines 60-62 and Fig. 19. For untagged frames, Source Address (SA), receive (RX) port number, and Destination Address (DA) are used to look up the 5-bit VLAN index values, which are then used in forwarding the frames. *See* col. 8, lines 52-62 see col. 10, lines 14-18.

The Applicant respectfully urges that Crayford is silent concerning the Applicant's claimed ***"said one or more indicia of frame type including an indicia of a protocol type"*** and ***"deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type and said VLAN value."***

While the Applicant uses a protocol type and a VLAN value to produce a derived VLAN value, Crayford operates quite differently. In Crayford's description for "tagged frames," an appropriate VLAN index is found by mapping the VLAN ID value included in a frame to a VLAN index value, with a mapping table. *See* Crayford col. 9, lines 60-62 and Fig. 19. There is no suggestion that a protocol type has any relevance in this mapping, or is otherwise used. Similarly, in Crayford's description of forwarding an "untagged frame," a VLAN index is looked up from an Address (SA), receive (RX) port number, and/or Destination Address (DA). *See* col. 8, lines 52-62 see col. 10, lines 14-18. Again, there no suggestion that a protocol type has any relevance to this process, or is otherwise used to derive a VLAN value. Thus, while Crayford take into account the presence of a VLAN tag in a packet, Crayford do not take into account the protocol type of a packet, for example whether the packet is an IP, IPX or other type of packet.

Indeed, the Examiner at paragraph 7 of the Final Office Action apparently agrees with this interpretation as the Examioner states that "Crayford does not expressly disclose wherein said indicia of frame type...further comprise a protocol type." *See* Final Office Action, paragraph 7.

In contrast to the Final Office Action, the Advisory Action appears to urge that protocol type is somehow suggested by Crayford's mention of IEEE specifications, such as IEEE 802.1d and IEE 802.3. The Applicant respectfully requests reconsideration of this new interpretation, and urges the Examiner's original interpretation was more correct. Indeed frames generally follow some type of IEEE specification. Yet following an IEEE specification is far different than using an indicia of protocol type contained in a frame to derive a ***derived VLAN value.*** That is, IEEE specifications may be followed and VLAN values determined irregardless of the protocol type of different frames. The

Applicant further respectfully directs the Examiners attention to claims 24, 26, 28, and 30 which provide further details of how protocol type may be used. Even assuming arguendo the Examiner's new interpretations, these claims are clearly not shown and are thus believed to be allowable.

Accordingly, the Applicant respectfully urges that Crayford is legally insufficient to anticipate the present claims under 35 U.S.C. §102, for example because of the absence of the Applicant's claimed novel ***"said one or more indicia of frame type including an indicia of a protocol type***" and "***deriving a virtual local area network (derived VLAN) value in response to said one or more indicia of frame type and said VLAN value.***"

Claims Rejected Under 35 U.S.C. § 103

At paragraph 7 of the Final Office Action, the claim 3-4, 6 and 8 were rejected under 35 U.S.C. § 103(a) as in light of Crayford in view of Shani, U.S. Patent No. 6,023,563, issued on February 8, 2000 (hereinafter "Shani").

Claims 4, 6, and 8 are believed to be allowable as they depend from a believed-allowable base claim.

In hopes of expediting the prosecution of the case, the Applicant would like to briefly discuss Shani in relation to its mention of "network-layer protocol type". In Shani, a "network-layer protocol type" may be extracted from a frame. *See* Shani, col. 10, lines 47-52. However, the "network-layer protocol type" is primarily used by Shani to make required adjustments to other protocol-specific fields of the frame. *See* col. 11, lines 1-6. "For example, in the IP protocol, the [network switch] decrements the field known as Time-to-live (TTL), or in the IPX protocol the [network switch] increments the field known as Transport Control." *See* col. 11, lines 3-6.

There is no suggestion in Shani that "network-layer protocol type" has any relevance or relation to a VLAN value, or may be used in some way to derive a VLAN value. Thus to combine Shani with Crayford, one would have to selectively ignore teachings

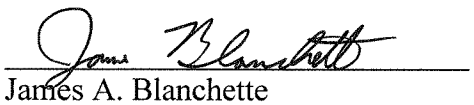
from both references. Specifically, one would have to selectively ignore Shani's teaching that "network-layer protocol type" should be used to adjust protocol dependent frame fields, such as the time-to-live field, and one would have to ignore Crayford's teaching that VLAN indexes are determined by other factors, which do not include network-layer protocol type. This selective discounting of teachings clearly involves impermissible hindsight. Accordingly, the Applicant respectfully urges combination of Shani with Crayford would still not make obvious the Applicant's claims.

In the event that the Examiner deems personal contact desirable in disposition of this case, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

In summary, all the independent claims are believed to be in condition for allowance and therefore all dependent claims that depend there from are believed to be in condition for allowance. The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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